

Title (en)

Debris detecting unit and robot cleaning device having the same

Title (de)

Fremdkörpererkennungseinheit und Roboterreinigungsvorrichtung damit

Title (fr)

Unité de détection de débris et dispositif de nettoyage de robot doté de celle-ci

Publication

EP 2494900 A1 20120905 (EN)

Application

EP 12156422 A 20120222

Priority

- KR 20110019359 A 20110304
- KR 20110088573 A 20110901

Abstract (en)

A robot cleaning device includes a debris detecting unit. The robot cleaning device includes a body, a driving unit to enable the body to travel, a drum brush unit provided at the body, to sweep up debris, using a brush and a rotating drum, a debris box to store the debris swept up by the drum brush unit, a debris detecting unit to detect whether debris has been introduced into the debris box through the drum brush unit during a cleaning operation, and a controller to determine whether debris is introduced into the debris box and whether debris has been accumulated in the debris box in a predetermined amount, based on introduction or non-introduction of debris detected by the debris detecting unit.

IPC 8 full level

A47L 11/33 (2006.01); **A47L 11/40** (2006.01)

CPC (source: EP US)

A47L 11/33 (2013.01 - EP US); **A47L 11/4013** (2013.01 - EP US); **G05D 1/021** (2024.01 - EP US); **A47L 9/281** (2013.01 - US); **A47L 9/2815** (2013.01 - US); **A47L 2201/02** (2013.01 - EP US); **A47L 2201/024** (2013.01 - EP US); **A47L 2201/06** (2013.01 - EP US)

Citation (applicant)

KR 20050073082 A 20050713 - LG ELECTRONICS INC [KR]

Citation (search report)

- [XAY] US 2005166355 A1 20050804 - TANI TAKAO [JP]
- [XY] WO 0108544 A1 20010208 - NOTETRY LTD [GB], et al
- [YA] DE 102007036157 A1 20090205 - BSH BOSCH SIEMENS HAUSGERAETE [DE]
- [Y] US 2005212478 A1 20050929 - TAKENAKA HIROYUKI [JP]
- [Y] US 2005183229 A1 20050825 - UEHIGASHI NAOYA [JP]

Cited by

DE102020207694B4; WO2021259629A3; WO2019143762A1; US11235893B2; US11572199B2; JP2014161596A

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

EP 2494900 A1 20120905; **EP 2494900 B1 20140409**; CN 102652654 A 20120905; CN 102652654 B 20160413; US 2012222224 A1 20120906; US 9402524 B2 20160802

DOCDB simple family (application)

EP 12156422 A 20120222; CN 201210052996 A 20120302; US 201213404762 A 20120224